

New Books.

Hand-book for Mapping, Engineering, and Architectural Drawing. By B. P. WILKINSON, C.E. &c. Weale, 1896.

THE want of such a work as this has long been felt, both by teachers and pupils; it will be welcomed by a large class of persons, and found of the greatest service in every engineer's architect's and surveyor's office. The following selection from the contents will shew the comprehensive nature of the work:—

Examples of map details.—North points—Borders for plans, &c.: map drawing, map engraving, map writing, designs for titles, designs for trees from nature, hill shading, conventional signs, railway plans and sections; geological diagrams and sections; alphabets, with rules and examples of the mode of constructing them; architectural drawing, shewing also the method of colouring different materials; flourishing, examples of; colours; specimen plate of map drawing, exemplified in lithography, and example of surveyor's field book. It well deserves an extensive sale.

The annexed extract may be serviceable to some of our readers:—

Instructions for Zinco-graphing Plans, Sections, and Drawings.

"Transfer a tracing of the drawing to be zinco-graphed on to a zinc plate properly prepared for drawing on—the transfer is to be made in a manner precisely similar to that employed for lithographing. Having transferred the tracing, take off the latter, and with a perfectly clean silk handkerchief remove the superfluous red chalk which will appear on the plate—draw in the lines and other parts in precisely the same manner as on stone. In drawing on zinc be careful not to breathe on it, and keep it at all times in a dry place; the least damp has a tendency to corrode the metal, when the drawing would be spoiled. Great care is requisite to keep the surface of the plate free from dirt, even the fingers must not be allowed to touch it, or those places where they are allowed to rest, will be rendered quite unfit for use. It is a very good way to keep so much of the plate as is not actually being worked on covered up. If spots of ink or grease should accidentally find their way on to the plate, they may be removed by rubbing such places with a little clean turpentine, and a piece of blotting paper. Zinco-graphy has much to recommend it in preference to lithography, as regards its use for plans and sections. It is not an invention of as long standing as lithography, and although the use and treatment of the zinc plate in the hands of the draughtsman is perfectly as simple as that of stone, yet with the printer the case is different. Printers in general have not had as much experience of zinc printing as they have had of stone printing, consequently there are fewer available zinc printers; this will not long be the case, for experience teaches us that zinc is the preferable material for railway plans and sections and for all works of magnitude requiring speed in the execution. Its extreme portability and cheapness are its principal recommendations. It is much easier drawn on than stone. It is a difficult matter to use the drawing pen without a ruler on stone, the surface being polished there is a liability to slip; but the zinc being grained, the grain very much resembling drawing paper, the drawing pen lays hold of it, and crooked or straight lines may be drawn with as great facility as on drawing paper. Drawing on zinc is very destructive to the drawing pen. It will be necessary to set the pen about three or four times a day to insure always drawing fine lines. The best drawing pen to use for drawing on zinc is Hawkin's Everlasting Pen."

EGYPT: TEMPLE OF DENDERA.—A late letter from Cairo (May 17th), written, by an intelligent traveller, to the *Literary Gazette*, after describing the interest he felt in a Nile voyage to and from the second cataract, informs us that the Temple of Dendera has been completely cleared of all the rubbish with which it was encumbered, and is now to be seen as one of the most perfect of the Egyptian temples.

THE BATTLE OF THE GAUGE.—The Board of Trade have reported on the gauge question. They find themselves unable to remedy the serious evil already existing, as they see no just way of compelling the entire reduction of the 7 feet gauge. With some few exceptions the narrow gauge is to be hereafter employed uniformly.

THE DRAINAGE OF CAMBERWELL.—Some alarming reports are in circulation, as to the spread of typhus fever in this locality, through the defective state of the drainage.

Miscellaneous.

BRILLIANT WHITEWASH.—At the season has arrived, when every consideration of cleanliness and health prompts to the use of lime upon buildings, fences, &c., we give the following recipe for preparing the celebrated stucco whitewash, used on the east end of the President's house at Washington; colouring may be so added as to give any desirable tinge to the preparation:—"Take half a bushel of nice un-slacked lime; slack it with boiling water, covering it during the process to keep in the steam. Strain the liquor through a fine sieve or strainer, and add to it a peck of clean salt, previously dissolved in warm water; three pounds of ground rice, ground to a thin paste, and stirred and boiled hot; half a pound of powdered Spanish whiting, and a pound of clean glue, which has been previously dissolved by first soaking it well, and then hanging it over a slow fire, in a small kettle, within a large one filled with water. Add five gallons of hot water to the whole mixture; stir it well, and let it stand a few days covered from dirt. It should be put on quite hot; for this purpose it can be kept in a kettle on a portable furnace. It is said, that about one pint of this mixture will cover a square yard upon the outside of a house, if properly applied. Brushes, more or less small, may be used, according to the neatness of the job required. It retains its brilliancy for many years. There is nothing of the kind that will compare with it, either for inside or outside walls."—*New York Sun.*

BOYDELL'S PATENT HINGES.—Mr. James Boydell, of the Oak Farm Iron-works, has just obtained a patent for improvements in the manufacture of hinges, both iron and brass. The first improvement consists of casting hinges, with the pivots on which they turn, in one piece: in order to accomplish this, one flap is cast, provided with a suitable core in the shoulder to receive the pivot on which the hinge is to work; after this flap is cast, and the cores removed, the other flap is cast upon its edge in such manner that the two exactly fit, and the fluid metal entering the core in the first flap, forms the necessary pivot. The second improvement consists in a mode of casting brass hinges, when separate pins or axes are to be applied, after the flaps are cast; they are cast on cores not going quite through at one end, and with a little projection at the other—so that, when a pin of the proper length is introduced, the excess of metal is beaten down and filed off, and the pin is completely inclosed. The third improvement consists in casting the flaps for several hinges in one piece, and then dividing them. In casting flaps for hinges it has been usual to have a separate mould for each flap, although several moulds are made in the same box; but the patentee proposes to cast a length of—say, six for instance—with projections on the mould to form grooves, where they are to be divided—so that each hinge can then be broken off, and finished by grinding. A fourth improvement consists in annealing cast-iron hinges in coke ovens.—*Mining Journal.*

THE NEW HIGHWAY BILL.—Considerable opposition is manifested throughout the country to the new Highway Bill, now before Parliament. The objectors assert that surveyors of highways, appointed under the existing system, are more competent to discharge the duties of the office than any comparative stranger could be; in consequence of their local knowledge—that it is the interest of the present surveyors to employ the poor of their respective parishes—that the proposed change would take the management of parish matters, and parish monies, out of the hands of the parishioners—that it would be attended with increased expense, which country districts are ill able to bear—and that it would be unjust towards parishes which have been well managed, to make them pay for the negligent management of others.

METROPOLITAN IMPROVEMENTS.—A Government bill has just been brought into the House of Commons to enable the Commissioners of Woods and Forests to construct a new street from Spitalfields to Shoreditch, and for that purpose to raise a sum of 120,000, on the "Metropolis Improvement Fund."

SKELTON CHURCH, YORKSHIRE.—Mr. Evan Christian, architect, is about to publish a complete illustration of this peculiarly interesting example of the early English period.

SPECIAL SUPERVISION.—The following extract seems to shew that the ants have architects, if not official referees:—"A wall had been erected, with the view of sustaining a vaulted ceiling, still incomplete, that had been projected towards the wall of the opposite chamber. The workman who began constructing it, had given it too little elevation to meet the opposite partition upon which it was to rest. Had it been continued on the original plan, it must infallibly have met the wall at about one half its height; and this it was necessary to avoid. This state of things very forcibly claimed my attention; when one of the ants, arriving at the place, and visiting the works, appeared to be struck with the difficulty which presented itself; but this it as soon obviated, by taking down the ceiling, and raising the wall upon which it reposed. It then, in my presence, constructed a new ceiling with the fragments of the former one."—*Huber.*

GLASTONBURY CROSS.—Glastonbury is rich in architectural beauty; the ruins of its abbey are justly regarded as among the most beautiful in England, and are carefully preserved. It is with much pleasure we learn from the *Great Western Advertiser*, that the inhabitants are about to rebuild, in harmony with the peculiar features of the town, the High Cross at the intersection of the streets, on the foundation of the old Market Cross, removed A.D. 1806. Workmen are now engaged in opening the ground, and the foundation-stone is to be laid by Mr. Thomas Porch Porch, who has paid marked attention to procuring the best possible plan for the building. The Cross will be about fifty feet high, composed of Bath stone, and highly ornamented throughout.

RAILWAY AND METROPOLITAN IMPROVEMENTS.—Under this head the current number of the *Westminster Review* has a very interesting article containing several important suggestions, deserving the attention of our readers.

MEETINGS OF SCIENTIFIC BODIES

During the coming Week.

MONDAY, June 15.—Statistical, 12, St. James's-square, 8 P.M.
TUESDAY, June 16.—Linnæan, Soho-square, 8 P.M.; Civil Engineers, 25, Great George-street, 8 P.M.
WEDNESDAY, 17.—Society of Arts, Adelphi, 8 P.M.; Geological, Somerset House, 8½ P.M.; British Archaeological Association, Western Literary Institution, Leicester-square, 8½ P.M.
THURSDAY, 18.—Royal, Somerset House, 8½ P.M.; Antiquaries, Somerset House, 8 P.M.
SATURDAY, 20.—Astric, 14, Grafton-street, 8 P.M.

TENDER.

For Ely Corn Exchange and Poultry Market:—

Freeman, Ely.....	£1,000
Peck and Son, Cambridge.....	1,000
Bullock and Co., Cambridge.....	1,000
Sugars, Lynn.....	1,000
Newham, Lynn.....	1,736
Legge, Ely.....	1,644
Oats, Cambridge (accepted).....	1,500

NOTICES OF CONTRACTS.

[We are compelled, by the interference of the Stamp Office, to omit the names of the parties to whom tenders, &c., are to be addressed. For the convenience of our readers, however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent Garden.]

For the execution of Contract No. 2 on the Dereham and Lynn line of railway, commencing at the termination of Contract No. 1, in the parish of Marlborough, and terminating at Swaffham, being a length of 12 miles; comprising the usual works of excavation, embankment, bridges, culverts, &c., together with a station-house at Swaffham.

For the execution of the several works to be done in building an additional wing on the men's side of the Kent County Lunatic Asylum, Barming-heath, and making other alterations.

For the erection of a new barrack, &c., for officers, at Portsmouth, for the Board of Ordnance.

For the repairs of the roads over, and at the ends of all, or any one or more, of the following Hereford County Bridges for three years, viz.:—Parsons Pole, Buckton, Crutts Ford, Barrington, Knaeham, Arrow Green, Brookend, Aymestrey, Dearfield, Lye Pole, Stoney-street, Dillaga, two at Irington, Hall of Garsford, Mortimer's Cross, Roswell, Combe, Nodid, Mookland, Broad Bridge, Orleton, Half of Cumberston, and Stoke Lucy Bridges.

For the erection of a warehouse on the east side of the basin at the Gloucester Dock.

For the erection of a warehouse adjoining that last mentioned.

For a supply of British iron for the East-India Company.

For the erection of a parsonage-house and offices at Taland, near Looe, county of Cornwall.

For the construction and erection of a gas-holder of 80 feet diameter, with columns, girders, &c., for the Commercial Gas Light and Coke Company, at Stepney.

For the excavation and construction of a gas-holder tank, 81 feet in diameter, for the last-named company.

For the erection of new transepts and chancel for Lye Waste Church, Stourbridge.

For re-roofing and altering Lye Waste Church, Stourbridge.

For the excavators', masons', bricklayers', carpenters', joiners', plumbers', plasterers', slaters', and painters' works required in the erection of schools in Darley-street, Leeds.